

# CHAPTER 5

## ACHIEVING QUALITY CURRICULUM AND INSTRUCTION

### Reflection

*When students are presented with curriculum that is meaningful and teaching that reaches them, they will be more inclined to participate in the process of learning and less likely to be off-task.*

### INTENDED LEARNER OUTCOMES

When you have worked through this chapter you should be able to:

- define curriculum, instruction and learning
- describe the features of curriculum that have an impact on classroom management and on the behaviour of individual students
- describe the nature of learning and its relationship to behaviour
- describe the features of quality instruction that facilitate effective student learning
- adapt instructional strategies according to students' stages of learning and individual needs
- recognise and discuss the complex interrelationship that exists between appropriate social behaviour, active engagement in learning, and a variety of instructional strategies that assist the integration of social and academic learning
- briefly explain the key concepts highlighted for this chapter.

Arthur Kelly et al (2007)  
Classroom Management:  
Creating Positive Learning Environments

### CHAPTER OVERVIEW

- Starter: Mr Sawyer makes plans...
- Introduction
- Curriculum and positive behaviour
  - Developmentally appropriate learning opportunities
  - Task relevance, achievability and success
  - Feedback, values and expectations
- The learning-behaviour relationship
  - The goals of learning
  - Self-efficacy
  - Motivation
- Instructional factors that facilitate effective learning
  - Critical instructional steps
  - Strategies to assist learning
- Integrated approaches encouraging academic and social adjustment
  - Mastery learning
  - Cooperative learning
  - Peer-oriented and peer-mediated strategies
- Classroom scenario

### STARTER: MR SAWYER MAKES PLANS...

'Teaching is a funny game,' thought Mr Sawyer as he walked to the Maths Block. 'Not only do things change every day in my Year 8 classrooms (Mondays are always great and Fridays horrible: why is that?), but there is such a powerful and direct connection between what I do and how my students react. Chaos theory is right...change one thing and change everything...There is no such thing as winging it because the material I prepare, how I present it, my mood at the time and the learning activities I use to involve students, seem to predict whether it will be a disastrous or a dreamy session.' As he meandered toward 9B Maths, with a clear plan and work that was interesting, he felt confident that this lesson would be a winner.

### Introduction

In the previous chapters we introduced the idea of an ecological perspective in relation to teacher and student behaviour. Some of the themes included the importance of having a preventative focus and understanding the role of positive relationships and effective communication processes in classroom management. In this chapter we consider the influence of curriculum and instruction on the creation of positive learning environments.

*Curriculum* represents all the activities a school provides to support the development of academic, social and personal abilities. Curriculum can be viewed as a description of the desired learning outcomes for students in terms of the skills, knowledge and attitudes they need to prepare them for adult life. *Instruction* on the other hand relates to the way teachers facilitate students to achieve those outcomes, the quality of the learning that occurs and the way students perceive themselves as participants in the learning process. Although the term 'pedagogy' is widely used to describe teaching practices, we have chosen to mention it and maintain our use of the term 'instruction' in this new edition due to the specific teacher behaviours it stands for and the frequent use of this term in the educational literature. In order to optimise learner outcomes – including on-task behaviour, skill achievement and positive attitudes to learning – there needs to be a close relationship between high-quality curriculum, classroom management and instructional activities.

This chapter focuses on those issues related to curriculum and teaching that have an impact on student learning and on promoting positive behaviour. We explore the nature of learning by discussing learning goals, self-efficacy and motivation. We present a teaching cycle as a key to effective lesson presentation that also allows for different stages in learning to be addressed. Finally, we look at mastery learning, cooperative learning and peer-mediated approaches that can help to integrate academic and social competence in our students.

### Curriculum and positive behaviour

The notion of curriculum incorporates all the learning experiences and processes schools offer to students. It is more than a simple list of skills for individual attainment, and includes affective, social and intellectual dimensions, all of which combine to address students' unique and highly personal needs in the context of a positive learning environment.

Given the complex nature of curriculum, we need to appreciate its central role in educational effectiveness and in a positive approach to student behaviour. As we noted in Chapter 4, it is through curriculum that we communicate to students how much they are valued as individuals, and that as teachers we are partners in their learning experiences across the combined dimensions of social and cognitive development.

The school has an enormous responsibility to stimulate in students a desire for lifelong learning and an appreciation of the role individuals play in achieving social harmony within their communities. The school curriculum takes a central role in developing citizens who are motivated to learn, who have skills to actively solve problems and who are capable of making decisions individually and cooperatively at all stages of life.

Because curriculum encompasses social and academic dimensions, we need to consider a number of issues in relation to developing a positive approach to student behaviour.

### Developmentally appropriate learning opportunities

Children have differing social, emotional and cognitive *learning* needs according to their stage of development. We need to maintain a balanced approach to curriculum that reflects not only broad developmental levels, but also the range of individual differences within those levels.

The young child entering school may still be egocentric, concerned primarily with the self, and limited in the ability to see and understand others' perspectives. This has a particular impact on social development and the establishment of positive relationships with peers. Young children need support as they adjust to the increasingly social aspects of school life and develop the skills of sharing, taking turns, working together, and developing an understanding of the consequences of their actions. Time taken to support children in learning such social skills in the early years can provide a positive foundation for later social and emotional development (Walker, Kavanagh, Stiller, Golly, Severson and Feil et al., 1998).

The nature of prior experiences has a significant impact not only on a young child's ability to adjust to the social dimensions of the school but also on the ability to understand or make sense of the wider concepts being offered through the school curriculum. The home environment needs to provide a secure base as the child faces the many adaptations needed at school as he or she matures socially, emotionally and intellectually. Partnership between the school and the home at this early stage is therefore very important.

Young children need to be given very practical and real-life examples as they expand their understanding of the social demands of school situations and their ability to relate to others. Within daily learning activities they need explicit instruction in specific skills as well as a clear explanation of social expectations (see Box 5.1) rather than long, detailed explanations delivered after the event and distant from the social situation. An emphasis on direct explicit instruction in basic skills such as reading is also important in the early years (Stanovich, 1994; van Kraayenoord, 2005). In addition to the academic mastery of skills, however, the young student must also develop a belief that they are able to utilise those skills in daily life. A link has been reported between students' 'view of their own academic abilities and the presence of antisocial behaviours in childhood' (Pisecco, Wristers, Swank, Silva & Baker, 2001, p. 458).

### BOX 5.1

#### THE DEVELOPMENT OF COOPERATION THROUGH PLAY

Ms Smith realises that some children in their second year at school are having difficulty working together in groups. She introduces a tent to the class for small group activity within the context of the whole-class playtime.

The class discusses that only a few children at a time can play in the tent because of its size. It is agreed that a small group of children will play in the tent each day.

An adult is available to assist with putting up the tent as required. As the children struggle with the poles, pegs and ropes, the need to work together becomes evident. The children are also encouraged to respond positively to each other so that each child feels he or she has made a valued contribution to the process.

Where one child might behave inappropriately in this situation, the consequences of those actions can be calmly discussed. For example, if Fred tries to climb into the tent before it is completely assembled, its collapse on him can be used to demonstrate the need to wait until everything is secure. Children at this age need to learn that there are consequences to their actions within the context of a secure and supportive environment rather than a punishing, negative atmosphere.

Children in the primary school years have a greater experiential basis than children in the early years on which to build social and interpersonal relationships. Their social success in the early years, and the extent to which they have been assisted in developing an appreciation of others' points of view and the consequences of their actions will have an impact on their continued social development.

In developing the ability to understand and predict the consequences of their actions, children at this age can be encouraged to stop and think about the results of their actions, and thus begin to monitor their own behaviour. (In chapters 6 and 8 we discuss models of effective behaviour management that foster this ability.) A quality curriculum will provide opportunities for students to appreciate the impact of their behaviour as members of their school and the wider community. Increased opportunities to work with others and to learn from appropriately modelled behaviour are important aspects of this process. The skills of problem solving and cooperative decision-making will begin to be developed.

Daunic, Smith, Robinson, Miller and Landry (2000) explored ways for students in the middle years to develop positive strategies for coping with the increased complexity of their social world. The researchers introduced a schoolwide curriculum that addressed conflict resolution, and trained a core group of students in peer-mediation strategies that included understanding conflict, confidentiality and effective communication. A success rate of 95 per cent was reported in reaching a resolution acceptable to the disputing parties, with a developmental sequence noted in relation to the age of the peer mediators and the agreements reached. For example, older peer mediators were reportedly able to gain agreements between parties to 'get along' rather than to 'avoid each other' or 'stop the offending behaviour' (Daunic et al., 2000).

In the later years of school, students become increasingly able to participate in cooperative activities and to be cognisant of the roles they have to play in working together. Their view of the

world increases beyond the immediate school and community, with a continually broadening understanding of the social issues that affect the world at large (Krause et al., 2003). At the later-years stage students can talk about the effects of behaviour in abstract terms, based on their ability to recall past situations and sequences of events. In addition, they can hypothesise about the appropriateness of certain behaviours according to the situation, and engage in problem solving as participants within the larger community.

Curriculum plays an important part in the development of social abilities. Opportunities for learning provided within the school curriculum need to be sensitive to differing needs according to levels of student development and individual differences within groups of students. It is important that curriculum guides social and emotional development as well as academic skills and knowledge, all of which are pivotal in developing a positive approach to classroom and behaviour management.

### Task relevance, achievability and success

Student engagement and success rate are closely related to the quality of task performance and the amount of learning achieved. The higher the engagement and success rates, the greater the amount and the better the quality of task performance. Further, the better the performance on work tasks, the higher the level of learning that will be subsequently achieved.

Source: Cole, P.G. & Chan, L.K. (1994). *Teaching principles and practices* (2nd edn). New York: Prentice Hall.

*Task relevance* and interest are necessary features to consider in relation to curriculum materials. Students need to see the relationship between what is introduced to them in the classroom setting and their real-life situations, in order to view the activities as meaningful, interesting and significant (Christenson, Ysseldyke & Thurlow, 1989; NSW Department of Education and Training, 2003a; Phillips, Fuchs, Fuchs & Hamlett, 1996; see also the review of William Glasser's work in Chapters 2 and 7). This may mean taking extra steps to ensure that the skills being introduced are worth learning and relevant to students' experiences. Young children in particular will need carefully selected topics of relevance to their local and cultural experiences. As the ability to relate to abstract situations develops, content of greater depth and wider experience can be introduced. Students need to be provided with opportunities to learn, practise and apply information and skills that are meaningful, interesting and directly related to the achievement of learning outcomes (Cole & Chan, 1994; Krause et al., 2003).

Tasks also need to be achievable so that students experience success (Arthur-Kelly, 2005). This success, however, needs to be based on the belief that the effort put into learning will be rewarded. If tasks are too difficult, a student may become frustrated, leaving him or her the opportunity to exhibit unacceptable behaviours as a means of expressing frustration – especially if such failure is experienced frequently. Likewise, if tasks presented are continually too simple and unchallenging for the student, similar exhibitions of frustration and boredom may occur. In addition, a high success rate means that students do not need to spend further time learning the correct responses and are instead motivated to complete future tasks.

The class curriculum needs to be structured to ensure that all students are actively engaged in worthwhile academic activities, are challenged at their appropriate level of ability and are able to experience frequent success. This is achieved through carefully assessing students' existing strengths and abilities, designing learning tasks that will enable them to move to the next step in skill development, and providing advance instruction and guidance as new skills are being mastered. In this way, anxiety and frustration are minimised, and students feel confident in the support provided to assist them in learning new tasks (Arthur-Kelly, 2005; Brophy, 1998; Conway, 2005a; Westwood, 1998). When teachers are clear about their lesson objectives, the tasks set are more likely to enhance their students' academic engagement (Jordan, Lindsay & Stanovich, 1997).

The task of meeting the varied needs of individual students within a class can be quite daunting. Teachers need to structure the curriculum so that all students are actively engaged in learning and are able to achieve success. At the same time, students need to be *increasingly* challenged in their learning, which requires considerable planning on the part of the teacher. It may be necessary to limit the number of facts, concepts or strategies for some students in order to focus on the most important and useful information that needs to be learned (Algozzine, Ysseldyke & Elliott, 1997). Dyck, Sundbye and Pemberton (1997) and Schumm, Vaughn and Leavell (1994) proposed an interactive planning model that enables teachers to systematically address varied goals, activities and evaluation procedures to meet the needs of a diverse group of students. This model is based on a three-level pyramid process of planning around a set topic or theme. At the first level, or base of the pyramid, planning addresses the objectives to be achieved by all or nearly all students in the group. Planning at the second level addresses objectives for most but not all students. Planning at the third level identifies objectives specific to some of the students. The model supports flexible and interactive planning around themes or topics and provides a framework within which task relevance, achievability and success can be individually addressed.

### Feedback, values and expectations

*Feedback*, or information given to students as they participate in daily activities, provides a key link to maintaining a positive approach to behaviour and the curriculum materials being presented. Research demonstrates that feedback is a crucial element in the learning process and that practice without feedback will not result in effective learning (Dick & Reiser, 1989; Greenwood, Arreaga-Mayer & Carta, 1994).

Feedback can take the form of monitoring student responses and maintaining a focus on attaining specified goals. When a student provides a correct response, feedback acknowledging this is important to the student's motivation for further learning. Feedback in the form of an incomplete response can be effective in encouraging further participation in the learning process. For example, if the teacher provides prompts such as 'It starts with ...', or rephrases a question, the student can be encouraged to think more about the response without feeling inadequate. In a situation where the student provides an incorrect response, rephrasing and prompts may assist the student, but the teacher should avoid unnecessarily dwelling on the topic. It may be sufficient to indicate the correct response and provide further opportunities for the student to practise a correct response to a similar situation. The teacher can evaluate the learning situation to see if further

guided practice is needed to correct the error or if an alternative learning situation should be presented, such as smaller steps or more demonstration and explanations (Arthur-Kelly, 2005).

Additionally, feedback communicates to students that the teacher is recognising their efforts and progress, particularly when it is given frequently in relation to the goals set, and linked to the individual learning needs of each child. Feedback that provides information to a child about individual competencies and progress greatly influences the long-term motivation to participate in the learning process, whereas feedback that serves only to compare one child's responses with those of other children has not been found to have the same motivating effect (Cole & Chan, 1994; Good & Brophy, 2000).

Through effective and consistent feedback, the teacher also establishes a positive relationship with individual students by communicating to them that they are valued (see Chapter 4). Feedback that is encouraging of individual and group efforts and that recognises strengths indicates to students that the teacher is taking notice and is willing to listen to what they have to say. Students who believe they are respected as individuals feel comfortable in taking risks without fear of being criticised for making mistakes. They can therefore concentrate on achieving success rather than avoiding failure.

In addition to communicating to students that they are valued, teacher-modelled behaviours demonstrate a positive expectation that students will be able to complete the set tasks. Such behaviours could include allowing sufficient pause time for answers, giving prompts and rephrasing questions, encouraging students to try without criticising inappropriate responses, and providing academic work that is increasingly challenging (Good & Brophy, 2000; Robinson, 2005).

### Summary: Curriculum and positive behaviour

The curriculum provides a broad framework designed to address students' intellectual, emotional and social needs. Set in the context of a positive teacher-student relationship, curriculum has a vital part to play in enhancing quality classroom management practices. Curriculum has a powerful impact on positive student behaviour when it is responsive to the developmental needs of students, and when the tasks presented are relevant to present and future needs and are achievable with a high degree of success.

The teacher can communicate high expectations of student success through the activities provided by the school and classroom curriculum and their own behaviour, while at the same time providing positive and encouraging feedback that is supportive of each student's stage of learning. A positive approach to classroom learning is enhanced when teachers – through managing the curriculum – indicate to students that they are valued for their efforts and achievements.

## The learning-behaviour relationship

In this section we are interested in the student's involvement in and control of the learning process, the importance of attention to tasks, and the development of the child's self-efficacy. The concept of a mastery-focused classroom as opposed to a competition-focused classroom is explored in terms of the importance of establishing in students a desire for lifelong learning, and relatedly, pro-social behaviour.

*Learning* involves the process of making sense of information, and of comprehending and mastering skills and knowledge as a result of interacting within a supportive learning

environment. It is more than the acquisition of knowledge and skills. The result of learning is demonstrated through the performance of skills, knowledge and/or attitudes.

While the learning process is highly individual and personal for students, the way in which the teacher manages the learning environment is critical to not only the quality of learning that takes place but also the attitudes that students develop in relation to themselves as learners.

We now examine two aspects that have an impact on the way students approach learning tasks and engage in the process of learning. First, students can be affected by the nature of the goals of learning they believe their teacher holds. Second, there is the issue of self-efficacy, meaning a student's approach to learning based on that student's perception of his or her own ability in relation to the goals established in the classroom. As discussed below, both aspects can influence student motivation.

## The goals of learning

Teachers have a powerful influence on student learning through the nature of the performance goals they establish in their classrooms. Such goals can be task-oriented or ability or achievement-directed.

*Task-oriented* goals indicate to students that the process of learning is valued and therefore function to encourage students to improve on their previous performance. Importance is placed on the acquisition of new skills and on the effort given to such learning. *Ability- or achievement-directed* goals, on the other hand, indicate to students that they are valued only for their ability when they achieve comparatively high outcomes or when they outperform others (Phillips et al., 1996). Task-oriented goals stress self-improvement, while achievement-directed goals stress social comparison.

A student's approach to learning may be determined by his or her understanding of the teacher's goals for learning. If a student believes he or she will be valued only through favourable comparison with other students in the class, then the amount of effort that student puts into learning will be determined by the extent of the belief that he or she can compete with other students. Teacher feedback that focuses on comparing students with others (controlling), promotes the development of such perceptions. In contrast, if a student believes his or her learning efforts will be valued when there is demonstrated improvement in his or her own standard, then that student will give greater effort to the learning situation and have an increased belief in his or her own ability to succeed. Such perceptions are fostered through the careful structuring of learning materials into small, achievable steps, and through monitoring progress according to the student's individual level.

### On reflection

*As you think about your teaching experiences to date, what types of student learning goals have you established? Were they meaningful for your students?*

## Self-efficacy

The individual's belief that he or she has the competence necessary to succeed and that success is related to his or her own efforts is known as *self-efficacy* (Ames & Archer, 1988; Brophy, 1987; Gillies,

2005). Students who demonstrate high *self-efficacy* believe in the power of effort and are able to develop long-term strategies to assist them in learning by setting goals of moderate difficulty, establishing a commitment to pursuing those goals and concentrating on achieving success.

The power of effort and persistence associated with self-efficacy is greater in individuals who are able to control their own performance rather than relying on external reinforcement to determine their efforts. Further, such students do not fear failure and develop a secure belief in their self-worth. Their worth is valued when they know they have demonstrated effort in learning and that this effort is recognised by the successful gains they have made. Students are profiled against the curriculum rather than against their peers. When students can see that they have been successful in achieving what teachers have asked them to do, they are assisted in developing an internal locus of control. That is, the students believe their success is due to their efforts to engage in the learning process.

## Motivation

*Motivation* describes the drive to take part in the process of learning and the later drive to perform the skills and knowledge acquired in that learning (Brophy, 1987; Krause et al., 2003). While some students appear to be motivated to learn, it is possible to assist others in acquiring this skill through communicating expectations and, through significant others – especially the class teacher, parents and peers – modelling appropriate learning behaviours.

Teachers assist students in developing their desire to participate in the learning process by ensuring that the classroom is supportive of students' attempts, and that the learning objectives are meaningful and at a level of difficulty appropriate to each student. In addition, students need to be clear about what they are to learn or master and how well they are going in relation to achieving that end. If they are experiencing difficulties, they need fast and efficient corrective procedures that minimise frustration and the learning of errors. When students repeatedly do not succeed, they often become frustrated and caught in a self-perpetuating failure cycle whereby they avoid engaging in that particular activity (Larkin, 2001; Robinson, 2005). As a result, they miss future opportunities for practice and chances to learn, which in turn reduces self-esteem and motivation (Westwood, 1995).

Motivation to learn is enhanced when students realise that the amount and quality of effort they put into an activity is linked directly to the outcomes they receive from that activity (Howell, Fox & Morehead, 1993). It is therefore desirable to focus on students mastering instructional objectives that are set according to individual abilities rather than on comparing one student's performance to that of another (Arthur-Kelly, 2005; Brophy, 1987).

## Summary: The learning-behaviour relationship

As we have seen, the ability to learn effectively is a complex and vital process. It is therefore very important for teachers to evaluate students' perceptions of their own ability, the ways in which their efforts are valued by themselves and significant others, and the nature of the goals of learning that are valued in the classroom. Classrooms that encourage an individual mastery focus on learning generate in students a belief in the self as a successful learner confident in their own

ability – without the need for comparisons with others. Such students are more likely to focus on the task of learning and are less likely to become off-task or disruptive.

While student learning is clearly a highly individual process, the teacher plays an important role in establishing the conditions for learning. In the following section we discuss more specifically the factors that enable the teacher to establish an environment most conducive to learning.

## Instructional factors that facilitate effective learning

*Instruction* is defined as the set of behaviours required to effectively guide or facilitate student learning outcomes in defined curriculum areas. The teacher's role in instruction is often to facilitate the learning process and guide students in interactions with ideas, materials and people. In some situations, the teacher also provides direct instruction to students. The focus should be on how students learn and on how best to meet students' needs instead of on a teacher-directed and centred view of controlling the learning process. In this section we discuss critical aspects of an effective instructional process and how these features assist students as they progress through the four key stages of learning, namely, acquisition, fluency, maintenance and generalisation.

A teacher's understanding of how students learn will influence that teacher's decisions about how he or she delivers instruction. For example, the *social-constructivist models* of teaching and learning, and the more traditional *transmission-oriented* classrooms can be contrasted (Brophy, 1998; Udvari-Solner & Thousand, 1996). Following a constructivist perspective, teachers structure situations in which learners build their own understanding by making links between new and existing knowledge. In the more traditional transmission-oriented model of teaching and learning, teachers are described as guiding students' learning through a series of carefully sequenced steps, with a stronger focus on teacher direction.

Instructional processes can be viewed on a continuum reflecting these core theoretical perspectives, ranging from teacher-directed interventions (or explicit instruction) to student-directed interventions (or implicit instruction) (Keel, Dangel & Owens, 1999; Mercer, Lane, Jordan, Allsopp & Eisele, 1996). *Explicit instruction* emphasises the mastery of skills and concepts, and involves the teacher maintaining a firm control of the teaching-learning process through procedures such as demonstrating, modelling, explaining, questioning, giving corrective feedback and providing opportunities to practise new skills to the point of mastery. This approach is preferred when students do not have a depth of prior knowledge and need to develop proficiency in specific skills that are basic to subsequent learning (Bolich, 2001; Duker, Didden, & Sigafoos, 2004; Westwood, 1996). *Implicit instruction*, on the other hand, emphasises the thought processes involved in learning. Implicit instruction occurs, for example, when students discover new knowledge and construct their own meanings. This approach is appropriate where the focus is on content that builds on students' well-developed prior knowledge and where the students are capable of independent problem solving (Howell et al., 1993).

Teachers vary their instructional approaches depending on the nature of the syllabus content and the needs of the learner. The teacher's role is to help students work towards becoming



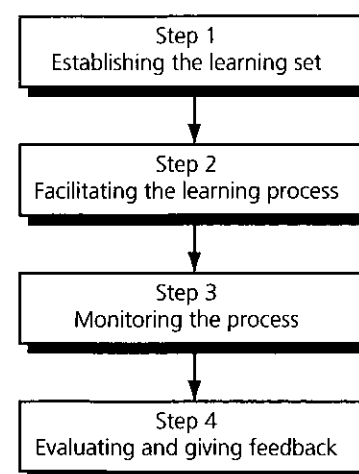
increasingly efficient in their learning by directly teaching students the strategies necessary for becoming effective independent learners. Independent learning requires the use of self-regulatory and meta-cognitive strategies – that is, the students are aware of the particular problem-solving and information-processing strategies they are able to use in the learning process. To achieve this, teachers scaffold the level of their support from explicit to implicit instruction so that students learn to regulate their learning efforts (Brophy, 1998; Conway, 2005b; Mercer et al., 1996; Westwood, 1995).

### Critical instructional steps

The steps listed in Figure 5.1 have been identified as critical in the challenge to facilitate students' attention to tasks and their participation in the learning process (Algozzine et al., 1997; Arthur-Kelly, 2005; Cole & Chan, 1994; King-Sears & Cummings, 1996; Mercer et al., 1996; Rosenshine, 1995; Rosenshine & Stevens, 1986). Based on the model of explicit teaching and learning, these steps can be effectively integrated into classroom instructional situations according to students' needs and targeted learning outcomes.

Well-planned lessons systematically address the steps in Figure 5.1, and are less likely than others to be interrupted by students who are confused about what is expected of them, or who are frustrated because of repeated failure. In addition, the steps outlined provide a systematic approach to planning, implementing and evaluating instruction so that the teacher is also certain of the procedures to follow at any one time and of the reasons for doing so (Arthur-Kelly, 2005; Hudson, Lignugaris-Kraft & Miller, 1993). This sequential process is readily adopted into a range of methods for organising instruction – such as mastery learning, cooperative learning and peer tutoring – and is equally appropriate for individual, small-group or whole-class situations (Brophy, 1998; Jenkins, Antil, Wayne, & Vadasy, 2003; Vaughn, Hughes, Watson Moody & Elbaum, 2001).

FIGURE 5.1 CRITICAL INSTRUCTIONAL STEPS



#### Step 1 Establishing the learning set

The teacher motivates students to take part in activities by clearly stating goals, indicating the relevance of the lesson and establishing the expectation of success. It is also important to review the previous day's work and to link new learning to it. Advance organisers (discussed in greater detail later in this chapter), outlining the lesson, providing key concepts and vocabulary, and explaining links to prior learning also play a key role at this stage. Tasks need to be explained in sufficient detail so that the students understand what is expected of them and have developed, where possible, a clear learning goal for the lesson. Students' understanding needs to be checked frequently to avoid confusion and incorrect learning.

#### Step 2 Facilitating the learning process

In order for learning to take place, students need to interact with the lesson content and receive appropriate emotional and intellectual support in the learning process. This may mean interacting with other students, talking things through to clarify their thoughts and assisting one another to promote understanding and skill mastery. The teacher's role in this process is to ensure that such opportunities exist within an orderly management framework, while maintaining a focus on the quality of instruction provided. This includes giving prompts, guided practice or demonstrations to make sure students are interacting with the instructional materials at a level that ensures success, and pacing lessons to keep the information relevant and challenging. It is also important that students maintain a high rate of task-engagement and that corrective feedback is provided to avoid students practising errors. At this stage it is important for students to receive high-quality instruction, which includes modelling, explanations and scaffolded practice to support them as they actively construct their understanding of the materials.

#### Step 3 Monitoring the process

Additional independent practice with activities that students can complete without teacher assistance is important for consolidating learning and developing fluency and automaticity of responses. Opportunities for independent practice can be provided through strategies such as peer tutoring, cooperative learning, instructional games and computer-assisted programs.

Ongoing monitoring of the learning process – with high levels of interaction between teacher and student – is necessary to ensure that students remain focused on the learning tasks and are continually progressing towards achieving identified learning outcomes. Frequent checks of student learning can eliminate the practising of errors and establish deeper levels of understanding. Careful monitoring of students' understanding will allow the teacher to gauge the level of continued support that is needed by each student to ensure accuracy of learning. Some students may only need monitoring and feedback after the initial modelling process, while others may need additional explanation about particular aspects of the given tasks.

#### Step 4 Evaluating and giving feedback

Evaluation in terms of the specific nature of the lesson content is necessary so that feedback is proactive in continuing the learning process, and recognition is given to individual learning rates

and needs. New goals can be established based on evaluation so that the learning process continues within the context of an appropriate instructional match.

The quality of instructional variables in lesson presentation has a direct impact on student attention to tasks and their engagement in the learning process. The concept of mastery is explicit, as is the need for the teacher to be continually directing the learning of the academic content, focusing attention to the task, preventing the practising of errors and providing feedback that allows the student to realise that his or her individual efforts in the learning process are valued.

### Levels of learning

Lesson presentation needs also to take into account targeted levels of learner proficiency (Alberto & Troutman, 2003; Algozzine et al., 1997). These include acquisition, fluency, maintenance and generalisation (see Table 5.1).

To help understand each of the levels in Table 5.1 it is useful to reflect on your own experience of learning to drive a car or mastering some other new and demanding task. Here, we use the experience of learning to drive in order to illustrate the experiences of students as they participate in learning new information, skills and knowledge in the classroom.

#### Acquisition

You begin the long process of acquiring the skills to drive. At first all your effort goes into getting it right. You know: the clutch out and accelerator in at the same time, or else the car does some very unpredictable things that draw undue attention to you.

At this time of skill *acquisition*, each step requires considerable concentration as you deliberately address each detail. You have to remember to check the rear-vision mirror and put on the blinker, or is it the other way around? The person sitting beside you is a very necessary support in ensuring that you remember each small step and carry it out correctly. Each session typically begins with the words, 'Now, remember what we did last time.' You need repeated demonstration, explanation and guided practice to master the many skills required to drive a car around a block.

Positive and encouraging feedback on each step – without reprimand for small mistakes – is essential. You need a secure learning environment until you gain confidence in your ability to drive on your own.

TABLE 5.1 LEVELS OF LEARNING

Acquisition	Learning new information, skills and knowledge
Fluency	Performing skills and knowledge with automaticity
Maintenance	Performing skills and knowledge with automaticity over time
Generalisation	Performing skills and knowledge in new situations

#### Fluency

Before you go for your licence you need a lot of practice, and probably offer to drive your parents' or friends' cars at every opportunity. You need not only to overcome the jerky take-off, but also to demonstrate *fluency* in reverse parking and three-point turns, and the many other situations you will encounter in the driving test.

Practice, practice and more practice (or so it seems) is necessary before you reach a stage of fluency, accuracy and automaticity as a driver. Finally, you manage to pass the driving test and can drive independently, although ongoing monitoring of your skills continues – for example, do you respond to speed limits?

#### Maintenance

Only through continued driving do you manage to achieve *maintenance* of the skills you have acquired and to keep on getting them right. For example, you may not have had to parallel park for some time and then find the only available parking spot requires this. Have you maintained your skills or do you need additional practice or a few tries to get the car in place? The skills of driving become so automatic over the years that all the steps that take so much concentration at first are conducted with very little thought.

#### Generalisation

Sometimes you may be required to drive a different-sized car, with different control features. On the other hand, you may be required to drive in an unfamiliar city or on a rough and bumpy country road. Many circumstances can present themselves, offering a variety of situations to achieve *generalisation* of your driving ability. Each time you are confronted with a new situation, some of your previous fluency may decrease until you have had time to adjust and adapt. Further, if you do not use or practise your driving skills for some time, you usually need to review carefully all that was previously automatic until your fluency returns. It may not take as long as the initial learning experiences, but the process remains similar.

Similar analogies could be presented in relation to learning a musical instrument, learning to type, mastering the computer and so on. The important thing to note is that students are presented with many new learning opportunities throughout the school day, meaning they face similar challenges, feelings of frustration, the need for mastery and the need for success as you faced when you learnt to drive a car. (And as a further thought, did you ever enjoy being compared to a family member or friend who was a better driver or who learnt faster? No, but the feeling of self-control of the process of learning was great as you persisted in mastering this new and challenging process.)

At each of the four levels of learning, different instructional factors are required to maximise learning. At the acquisition stage, the strategies of modelling, demonstration and prompting (probably a lot) are necessary. The pacing of the presentation of new information has to be slow and carefully sequenced, as does the student's ability to respond to and apply such information. A lot of positive praise and reinforcement is also necessary for attempts and accurate responses. Errors must be quickly explained and corrected without reprimands.

In order for the student to achieve fluency, it is necessary that he or she has many opportunities to practise. Practice can be in the form of practical application or verbal rehearsal, and often both. The pace of performing a chain of tasks becomes quicker as accuracy increases. Reinforcement of correct responses may be lessened.

To ensure maintenance of newly acquired skills, independent application of the skill over time and in a variety of practical situations reinforces the relevance and usefulness of the learning process.

When it is necessary for a known skill to generalise to a different situation, it may be necessary to prompt the learning process, with careful pacing, until the student adjusts.

## Strategies to assist learning

The following techniques can be introduced not only to assist learning but also to help students to develop their own strategies to apply in learning situations (Deshler et al., 2001; Swanson & Deshler, 2003). While all students will benefit, the strategies outlined will be of particular assistance to those students experiencing difficulty in learning (Hudson et al., 1993; Robinson, 2005). This section outlines a range of teacher strategies to enhance content for students, as well as the process of teaching students strategies that will help them learn new material. All of these methods will help students develop a sense of control in the learning situation by focusing attention to the learning task, assisting information processing and enhancing motivation.

### Content enhancement

The teaching strategy of *content enhancement* refers to instructional adaptations that can be made to assist students to focus on the most important information and retain critical information (Algozzine et al., 1997; Hudson et al., 1993; Keel et al., 1999; Lenz, Bulgren & Hudson, 1990). The following are examples of content-enhancement techniques.

#### *Advance organisers*

*Advance organisers* help prepare students for a lesson. They consist of verbal or written information prepared by the teacher and are presented to students at the start of the lesson to indicate the content being presented. Advance organisers can include a list of steps to be taken in the lesson, background information, key vocabulary and a statement of intended learning outcomes. Student learning is enhanced when the information presented targets the specific instructional purpose of the lesson, and when students are trained to identify and record information from the advance organisers.

#### *Visual displays*

*Visual displays* provide another form of content enhancement, serving to demonstrate a relationship between different sections of information, and to help students organise the various aspects of information covered in the lesson or unit. The flow chart presented later in this chapter (see Figure 5.2) that describes the mastery-learning process is an example of a visual display. Maps showing different topographical features are another form of visual display. Visual displays can be used at several points in a lesson, for example to introduce a topic and to assist with guided and independent practice.

#### *Study guides*

*Study guides* also help emphasise important aspects of content. For example, direct questions that require short answers (such as the discussion questions provided at the end of each chapter in this book), an outline of the overall lesson content with areas that need expansion or completion, or a set of words and definitions that need to be matched. Study guides are particularly useful in the guided-practice stage of a lesson.

#### *Mnemonic devices*

*Mnemonic devices* are meta-cognitive strategies that prompt students to think about what they need to do to solve a problem, or that facilitate information acquisition and recall by making unfamiliar content easier to remember. Mnemonic devices typically consist of the first letters of key words that make up an easily remembered word. For example, Nagel et al. (1986, cited in Hudson et al., 1993, p. 116) used the mnemonic device TEENS to help students remember the five sensory organs Tongue, Ears, Eyes, Nose and Skin. Mastropieri and Scruggs (1998) provide further examples of mnemonic strategies.

As a meta-cognitive strategy, mnemonics reflect a blend of explicit and implicit methods (Mercer et al., 1996). They enable increased student independence in problem solving but are always dependent on initial explicit instruction on how to use them effectively. For example, Keel et al. (1999), reported the use of a mnemonic device to guide students to include important story elements following a 'who', 'when', 'where', 'what' and 'how' sequence. Critical elements of the program included explicit instruction and modelling of the strategy.

#### *Story maps*

*Story maps* provide a framework to assist students to build on prior knowledge as they develop an understanding of new information. A story map typically guides students to attend to the relevant parts of a story (see Keel et al., 1999).

## Teaching students to use learning strategies

The strategies just presented were developed by teachers to assist students at varying stages of the learning cycle to access and master the materials being presented. In addition, students themselves can develop strategies to assist them to process and apply new information (Deshler, 2005; Rosenshine, 1995; Swanson & Deshler, 2003). In the next section we review some of the *learning strategies* students can be assisted to use in their daily learning activities.

#### *Rehearsal strategies*

While *rehearsal strategies* may be associated negatively with groups of children chanting tables or repeating lists of names, individual silent rehearsal is a very effective strategy for students. Westwood (1998) identified the need for teachers to explicitly train students in the use of task-approach strategies through clear demonstration and verbal rehearsal of the steps required to complete set tasks. The students are then able to silently and independently rehearse the steps for future similar tasks. Another approach is for students to underline or highlight sections of print as they read through materials.